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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/043,898

01/11/2002

Takashi Ueda

10921.110US01

7265

7590

10/17/2003

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EXAMINER

NGUYEN, DILINH P

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,898

Applicant(s)

UEDA ET AL.

Examiner

DiLinh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manteghi (U.S. Pat. 6177726) in view of Takeuchi (U.S. Pat. 5482760).

Manteghi discloses a semiconductor device (figs. 4 and 10) comprising:

a first lead 12 having an inner portion (fig. 4);

a semiconductor chip 10 mounted on the inner portion of the first lead;

a second lead 22 having an inner portion electrically connected to the semiconductor chip; and

a resin package 28 (column 3, lines 49-53) for sealing the semiconductor chip together with the inner portion of the first and second leads;

wherein at least the semiconductor chip has outer surfaces coated with a coating film 62 (fig. 10, column 4, lines 30).

Manteghi fails to disclose the coating film formed of amorphous fluororesin and wherein the amorphous fluororesin is PTFE (polytetrafluoroethylene).

Takeuchi discloses a semiconductor device comprising a coating film is formed of polytetrafluoroethylene (column 13, lines 29-31). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Manteghi to provide a high efficiency and low cost for the semiconductor device, as shown by Takeuchi.

- Regarding claim 2, Manteghi discloses the semiconductor chip is electrically connected to the inner portion of the second lead via a wire, the coating film on the outer surfaces of the semiconductor chip also covering the wire and the inner portions of the first and second chip.
- Regarding claim 3, Takeuchi discloses the amorphous fluororesin is PTFE (column 13, line 30).
- Regarding claim 4, Takeuchi discloses the coating film has a thickness of 10 μm .

3. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manteghi (U.S. Pat. 6177726) in view of Takeuchi (U.S. Pat. 5482760) in view of Hohn et al. (U.S. Pat. 6245256).

Manteghi and Takeuchi fail to disclose the semiconductor chip is an LED chip and the resin package is formed of a transparent resin.

Hohn et al. disclose a semiconductor package (fig. 5, column 9, lines 14-23) comprising: the semiconductor chip is an LED chip (column 5, lines 10-12 and column 9, lines 20-23) and the resin package is formed of a transparent resin (column 9, lines 18-22). Therefore, it would have been obvious to one having ordinary skill in the art at

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the time the invention was made to modify the device of Manteghi and Takeuchi to assure in quality and reliability for the semiconductor device, as shown by Hohn et al.

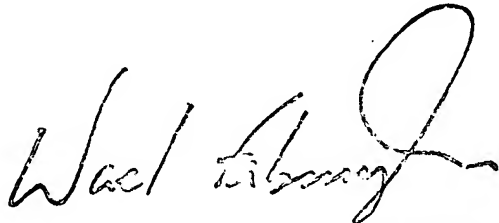
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DiLinh Nguyen whose telephone number is (703) 305-6983. The examiner can normally be reached on 8:00AM - 6:00PM (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

DLN
October 6, 2003


SUPERVISORY PRIMARY EXAMINER
TECHNOLOGY CENTER 2800